



U.S. DEPARTMENT OF
ENERGY

*Presentation to the SRS
CAB Strategic & Legacy Management Committee*

SRS Performance Measures Update

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EM *Environmental Management*
safety ♦ performance ♦ cleanup ♦ closure

Purpose

- Share format changes to Performance Measures Report as suggested by the CAB
- Provide an update of EM Performance Measures through July FY 2010

Acronyms

ARRA	American Recovery & Reinvestment Act
DRR	Domestic Research Reactor
FFA	Federal Facility Agreement
FRR	Foreign Research Reactor
GWSB	Glass Waste Storage Building
HW	Hazardous Waste
LEU	Low Enriched Uranium
HEU	Highly Enriched Uranium
LLW	Low Level Waste
LLMW	Low Level Mixed Waste
MLLW	Mixed Low level Waste
NU	Natural Uranium
SCDHEC	South Carolina Dept of Health & Environmental Control
SNF	Spent Nuclear Fuel
SRNS	Savannah River Nuclear Solutions
SRR	Savannah River Remediation
SWPF	Salt Waste Processing Facility
TRU	Transuranic Waste
TVA	Tennessee Valley Authority

Performance Measures - CAB suggested changes

1. Provide % Complete status for each measure
2. Provide End State target year for completion
3. Color Code FY2010 actuals to provide easier identification of those measures that are ahead, on or behind schedule
4. Show both ARRA and End State Targets for Transuranic (TRU), Mixed Low Level (MLL) Waste, Low Level (LL) Waste and Area Completion
5. Insure consistency of “Units of Measure” for Nuclear Materials presentations to CAB (e.g. containers vs. kilograms)
6. Create graphical analysis and lifecycle projections for key performance measures

Performance Measures- High Level Summary

Major Areas of Cleanup (as of 7/31/10)

End State % Complete

Nuclear Materials

Plutonium Dissolved	7%
LEU Shipped to Tennessee Valley Authority vendor (LEU is the result of blending HEU w/ natural uranium)	56%
Spent Nuclear Fuel (from FRR & DRR) Dissolved	0%

Liquid Waste

Disposition Radioactive Liquid Waste	
Produce Canisters	41%
Process Salt Solution	3%
Close Tanks	4%

Solid Waste

Radioactive Legacy Waste & NGW	
Transuranic (TRU) Waste Shipped	42%
Mixed Low-Level & Low- Level Waste Dispositioned	81%

Soil & Ground Water

Complete Remediation of Waste Sites	72%
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Facilities

Facility Decommission & Demolition	26%
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Reformatted Reporting Structure

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Notes:

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 On / Ahead
of Schedule

Behind Schedule


<u>End State Basis</u>	

EM Performance Measures – thru July FY 2010

<u>Nuclear Materials</u>		Unit of Measure	Cum Actuals thru FY 2009	FY 2010 Analysis		End State Analysis			
Measure				Actuals FYTD	Annual Target	Cum Act thru 2010 (FYTD)	End State	% Complete	Target Year to Complete
Plutonium & Enriched Uranium									
Plutonium Dissolved in H-Area for Disposition ¹		Containers	42	28	29	70	967	7%	2019
						See Note 3			
LEU Shipped to TVA Vendor (LEU = HEU blended with NU) ²		Trailers	297	20	20	317	564	56%	2019
SNF (from FRR & DRR) Dissolved (To begin in FY 2011)		Bundles	0	0	0	0	Being Developed	0%	2019

Nuclear Materials Notes:

- Quantities Since 2008, End State Quantity is Pre- Decisional
- LEU = Low Enriched Uranium
HEU = Highly Enriched Uranium
NU = Natural Uranium
SNF = Spent Nuclear Fuel
FRR = Foreign Research Reactor
DRR - Domestic Foreign Reactor
- Start-up of HB-Line South will double through-put capacity of plutonium disposition

 On / Ahead of Schedule

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End State Basis

Nuclear Materials End State Quantities and Target Year to Complete are based on 2008 Certified Life Cycle Plan

EM Performance Measures – thru July FY 2010

<u>Liquid Waste</u>		Unit of Measure	Cum Actuals thru FY 2009	FY 2010 Analysis		End State Analysis			
Measure				Actuals FYTD	Annual Target	Cum Act thru 2010 (FYTD)	End State	% Complete	Target Year to Complete
				7/31/10					
DWPF Canisters Poured & Tested									
Canisters Produced	Canisters	2,795		166	190	2,961	7,235	41%	2028
Tank Preparation and Closure									
Bulk Waste Removal Complete	Tanks	7		0	2	7	51	14%	
Heel Removal Campaign Complete	Tanks	4		0	2	4	51	8%	
Annuli Prepared for Closure ²	Tanks	0		0	2	0	43	0%	
Three Agency Preliminary Approval ³	Tanks	4		0	2	4	51	8%	
Three Agency Final Approval ³	Tanks	2		0	2	2	51	4%	
Tanks Isolated	Tanks	2		0	1	2	51	4%	
Operationally Closed	Tanks	2		0	0	2	51	4%	2029
SPF Salt Solution Processed									
Salt Solution Processed	k Gallons	2,967		879	2,220	3,846	120,690	3%	2028
Radioactivity									
Curies Stabilized in Canisters ⁴	k Curies	23,800		6,469	7,254	30,269	385,000	8%	2028

Liquid Waste Notes:

1. GWSB # 3 Contingency Capacity - TBD
2. 43 of 51 Tanks Require Annuli Preparation
3. Approval to Cease Waste Removal
4. Estimate based on Sludge Batch Sampling

5. Canister Storage Space Available: 1629 (As of end 7/31/2010)



On / Ahead of Schedule



Behind Schedule

End State Basis

Liquid Waste End State Quantity and Target Year to Complete are based on Rev 15 System Plan

EM Performance Measures – thru July FY 2010

Liquid Waste			FY 2010 Analysis		End State Analysis			
Measure	Unit of Measure	Cum Actuals thru FY 2009	Actuals FYTD	Annual Target	Cum Act thru 2010 (FYTD)	End State	% Complete	Target Year to Complete
			7/31/10					
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Radioactivity								
Curies Stabilized in Canisters ⁴	k Curies	23,800	6,469	7,254	30,269	385,000	8%	2028

Tanks 5 and 6 planned for late CY 2010. No impacts to Federal Facility Agreement (FFA) Commitments.

Tanks 18 and 19 planned for late CY 2010. No impacts to Federal Facility Agreement (FFA) Commitments.

Tank 18 to complete in CY2010. Tank 19 in progress for completion CY2011. No impacts to FFA Commitments.

Performance has not impacted Liquid Waste or other Programs. Contingency maintained to support facility operations.


EM Performance Measures – thru July FY 2010

<u>Solid Waste</u>	Unit of Measure	Cum Actuals thru FY 2009
Measure		
TRU, MLLW & LLW		
RH-TRU Waste Shipped for Disposal		17
CH-TRU Waste Shipped for Disposal		6,165
Total Transuranic Waste Shipped	Cubic Meters	6,182
Low Level and Mixed Low Level		
Waste Disposed (Legacy & NGW) ¹	Cubic Meters	105,564

FY 2010 Analysis	
Actuals FYTD	Annual Target
0	5
431	739
431	744
5,288	12,934

End State (Lifecycle) Analysis			
Cum Act thru 2010 (FYTD)	End State	% Complete	Target Year to Complete
17	68		
6,596	15,590		
6,613	15,658	42%	2038
110,852	137,578	81%	2038

1. Legacy Waste disposition complete;
Newly Generated Waste disposition is
Ongoing

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End State Basis


Solid Waste End State Quantities and Target
Year to Complete are based on
2008 Certified Life Cycle Plan


EM Performance Measures – thru July FY 2010

<u>Area Completion</u>		Unit of Measure	Cum Actuals thru FY 2009	FY 2010 Analysis		End State (Lifecycle) Analysis			
Measure				Actuals FYTD	Annual Target	Cum Act thru 2010 (FYTD)	End State	% Complete	Target Year to Complete
Remediations & Facilities D&D'd									
Remediations Completed	Release Sites		368	1	1	369	515	72%	2038
Facilities -Decommission & Demolition									
Industrial Facilities- Major ¹			232	3	2	235	759		
Nuclear Facilities			11	0	0	11	191		
Radioactive Facilites			7	0	0	7	40		
Total Facilities D&D'd	Facilities		250	3	2	253	990	26%	2032

Notes

1. Excludes smaller ancillary buildings

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End State Basis


Area Completion End State Quantities and Target Year to Complete are based on 2008 Certified Life Cycle Plan


EM Performance Measures – thru July FY 2010

Recovery Act (2009 - 2012)			FY 2010 Analysis		End State ARRA Analysis			
Measure	Unit of Measure	2009 Actual	Actuals FYTD	Annual Target	Cum Act thru 2010 (FYTD)	ARRA End State	% Complete	Target Year to Complete
Funding Spent								
SRNS		225,506	415,022	520,093	640,528	1,415,400	45%	2012
SRR		104	67,863	140,000	67,967	200,000	34%	2011
Total	\$ (000)	225,610	482,885	660,093	708,495	1,615,400	44%	2012
Solid Waste Disposition								
RH-TRU Waste Shipped for Disposal		17	0	5	17	39		
CH-TRU Waste Shipped for Disposal		281	431	739	712	4,961		
Total Transuranic Waste Shipped	Cubic Meters	298	431	744	729	5,000	15%	2012
PAD 1 - % TRU Waste Removed	%	0%	82%	100%	82%	100%	60%	2011
PAD 1 - % TRU Waste Disposed	%	0%	0%	20%	0%	90%	0%	2011
Mixed Low Level Waste Disposed ¹		325	68	359	393	1,075	37%	2011
Low Level Waste Disposed ¹		2,067	5,220	12,575	7,287	24,554	30%	2011
Total MLLW / LLW	Cubic Meters	2,392	5,288	12,934	7,680	25,629		
Maintain Newly Generated Low Level Waste Below Target Level	Cubic Meters	Met	Met	< 400	Met	< 400	NA	
Nuclear Material Disposition								
Depleted Uranium Oxide Shipped	Drums	0	5,409	15,606	5,409	15,606	35%	2010

Recovery Act Notes:

- Legacy Waste disposition complete; Newly Generated Waste disposition is Ongoing

 On / Ahead of Schedule


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AARA End State Basis

Recovery Act End State Quantities and Target Year to Complete are based on ARRA Certified Baseline

EM Performance Measures – thru July FY 2010

<u>Recovery Act (2009 - 2012)</u>		Unit of Measure	2009 Actual	FY 2010 Analysis		End State ARRA Analysis			
Measure				Actuals FYTD	Annual Target	Cum Act thru 2010 (FYTD)	ARRA End State	% Complete	Target Year to Complete
Soil & Water Remediation									
Characterized for Remediation	Waste Sites	4		10	12	14	22	64%	2011
Remediation Systems Installed	Systems	2		3	8	5	14	36%	2011
Remediations Completed	Release Sites	2		1	1	3	11	27%	2011
Ground Water Plumes Remediated	# of Plumes	1		3	4	4	7	57%	2011
Facility Decommission & Demolition									
Industrial Facilities- Major		0		3	2	3	11		
Industrial Facilities- Ancillary				4	6	4	3		
Total Industrial Facilities				7	8	7	14	50%	2011
Radioactive Facilities		0		0	0	0	16	0%	2011
Total Facilities D&D'd	Facilities	0		7	8	7	30	23%	2011
Reactors Decommissioned	# Completed	0		0	1	0	3	0%	2011
Operational Footprint Reduction (75%)									
Site Remediated/ Footprint Reduction	Acres	0		22,720	70,720	22,720	149,519	15%	2011

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AARA End State Basis

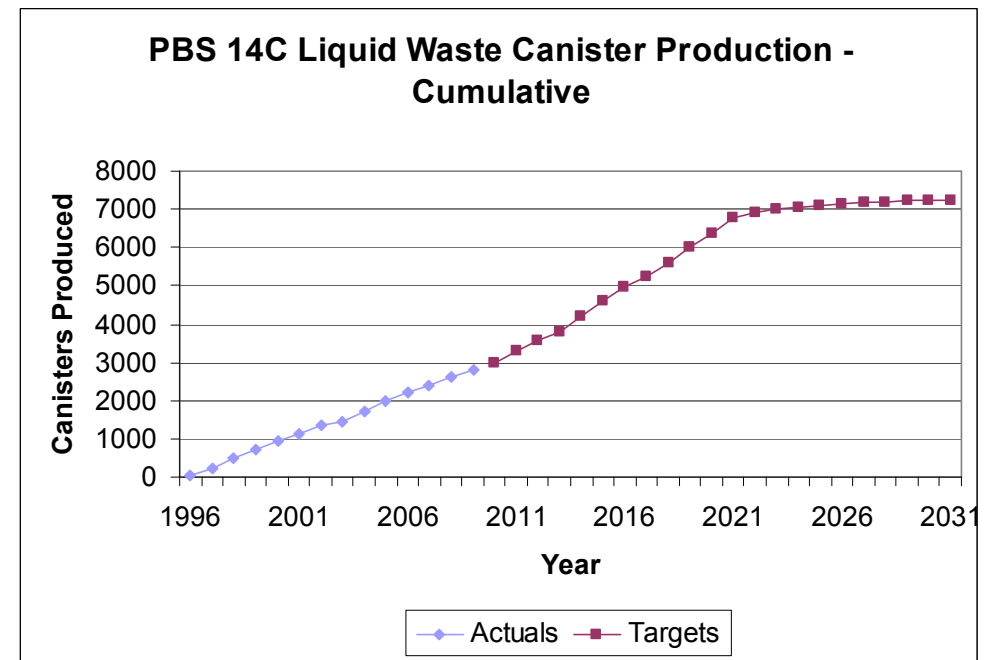
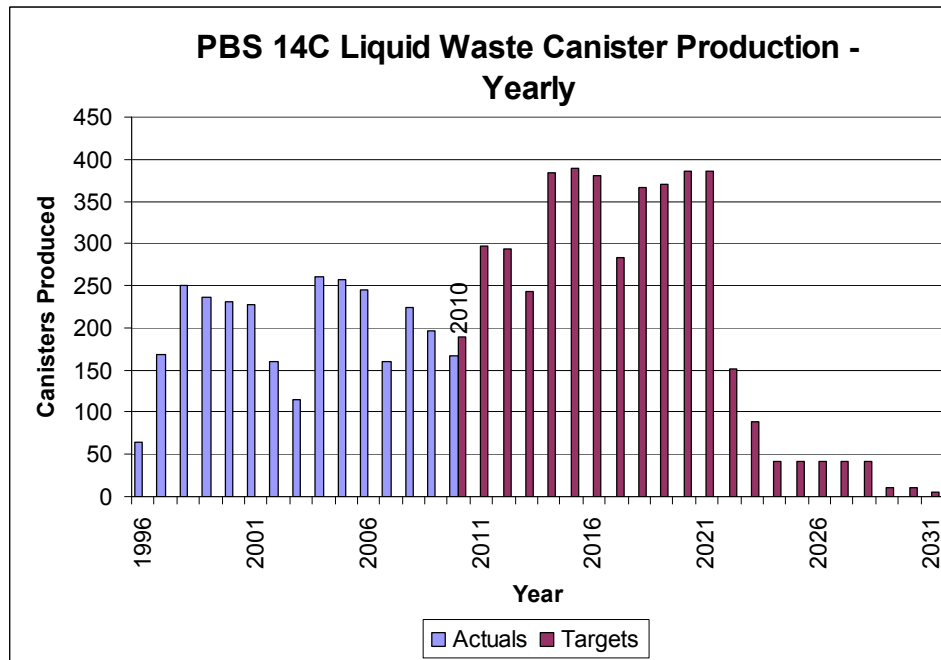
Recovery Act End State Quantities and Target Year to Complete are based on ARRA Certified Baseline

Work in Progress

For each major Performance Measure, a graphical depiction of the lifecycle (historical and forward looking) is being developed

The following measure for Liquid Waste – Canister Production is an example of how such projections will be demonstrated

Example Analysis: Liquid Waste Canister Production



End State Basis: Liquid Waste End State Quantity and Target Year to Complete are based on Rev 15 System Plan

Questions

Going forward how should the Performance Measures Report be shared with the CAB?

Frequency?

Options

Presentations at SLM, Full CAB or both

Distributed Reports

Other

- DOE-SR will continue to develop Lifecycle graphs for the various operational areas of EM operations
- A process for distributing the Performance Measures Report to the CAB will be developed
- Suggestions from the CAB for any additional improvements are welcomed